

Having described the invention, we claim the following:

1. A method of analyzing video surveillance data from a plurality of video inputs recording entrants to a secured location, comprising:

constructing a plurality of entrant profiles, detailing typical attributes of the entrants, via data mining algorithms;

analyzing video inputs, with a plurality of independent automated decision-making systems each determining if an abnormal condition exists based upon the constructed profiles; and

processing the determinations of the plurality of decision-making systems to determine if an alarm condition exists.

2. A method as set forth in claim 1, wherein the method further includes the step of identifying objects within the video inputs and recording this information as part of the entrant profiles.

3. A method as set forth in claim 1, wherein the secured area is a building, and at least one of the plurality of video inputs record an area adjacent to one of the entrances to the building.

4. A method as set forth in claim 3, wherein the secured area is an airport.

5. A method as set forth in claim 1, wherein the plurality of decision-making systems includes a neural network classifier.

6. A method as set forth in claim 1, wherein at least one of the plurality of decision-making systems interprets a temporal model of the video input extracted over a plurality of video frames.

7. A method as set forth in claim 1, wherein the step of processing the determinations of the decision-making systems includes combining a plurality of outputs of the decision-making systems into a single system output.

8. A method as set forth in claim 7, wherein the single system output is a weighted linear combination of the outputs of the plurality of decision-making systems.

9. A method as set forth in claim 1, wherein the step of processing the determinations of the decision-making systems includes selecting one of the plurality of decision-making systems and accepting its determination.

10. A method as set forth in claim 9, wherein the selection of one of the decision-making systems is performed by an independent neural network.

11. A computer program product, operative in a data processing system, for analyzing video surveillance data from a plurality of video inputs recording entrants to a secured location comprising:

a data mining portion that uses recorded information within a database to construct a plurality of profiles detailing typical attributes of the entrants;

a plurality of independent automated decision-making systems, each determining if an abnormal condition exists based upon the constructed profiles; and

an arbitrator that processes the determinations of the plurality of decision-making systems to determine if an alarm condition exists.

12. A computer program product as set forth in claim 11, wherein the entrant profiles include the typical time of entry and place of entry by an entrant to the building.

13. A computer program product as set forth in claim 11, wherein the computer program product further includes at least one pattern recognition classifier that identifies objects within the video inputs and records this information within the database.

14. A computer program product as set forth in claim 13, wherein the number of people present in an image is included in the recorded information within the database.

15. A computer program product as set forth in claim 13, wherein the entrant profiles include items typically carried by the entrant.

16. A computer program product as set forth in claim 11, wherein the arbitrator is a fuzzy logic system.

17. A computer program product as set forth in claim 11, wherein the system includes an alarm that notifies a human operator when an alarm condition exists.

18. A computer program product as set forth in claim 17, wherein the alarm recognizes at least two levels of alarm condition, such that the alarm notifies a human operator at the first level of alarm condition and sounds a generally audible alarm at the second level of alarm condition.

19. A computer program product as set forth in claim 11, wherein the data mining portion includes an artificially intelligent trained program that retrieves information from external data sources.

20. A computer program product as set forth in claim 19, wherein the external data sources include at least one preselected Internet web page.